Ovation™ Digital Twin Technology

Integrated Control and Simulation Platform Empowers Informed Decision-Making

Simulators are important tools for operator training, control validation and engineering testing. A simulator is significantly more effective when the process models are kept in synch with plant equipment and control system changes.

Use of outdated models hinders realistic training and prevents accurate control logic testing, both of which can reduce operator proficiency and plant efficiency.

Yet, simulator upgrades can be both costly and time consuming.

You have an existing simulator, but is it becoming expensive to maintain and operate? Not trusted by your staff? Can you afford to suspend training and control testing while waiting for model updates, which may be quickly outdated shortly thereafter?

Think about your training and control validation needs...

Can you adequately train new and experienced operators to handle abnormal situations?

Is your existing simulator difficult to maintain and keep in synch with your plant control system?

Do you have a reliable platform for testing control logic without disrupting plant operations?

Ovation™ digital twin technology provides accurate operator training, keeps pace with process changes and validates control logic without affecting plant operations.

OVATION™

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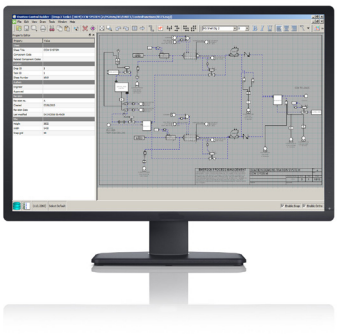
Embedded Ovation-Based Simulator Models



Ovation-based simulator models are created and maintained using standard Ovation engineering tools.

Ovation digital twin technology platform provides real-time evaluation of control strategies without risk to plant operations.

Ovation digital twin technology integrates high-fidelity simulation with the control system, both running in parallel to enable real-time advanced testing of new operating approaches in a risk-free environment before they are applied to the actual plant.

The digital twin simulator, implemented on a virtual platform, is an exact replica of the plant control system. Ovation-based models embedded in virtual controllers eliminate the complexity and cost of maintaining separate modeling software.

Standard Ovation engineering tools are used to create and manage accurate high-fidelity or empirical models. In-house staff familiar with Ovation can update plant models and training scenarios to remain in synch with the plant control system. With the unique ability to mix model fidelities, empirical-based models can be upgraded to high-fidelity models as time and finances permit.

As a mirror image of the plant's Ovation control system, the simulator can be used as a non-production test bed to validate control logic and security patch updates in a risk-free environment.

Validation

Control logic and 'what-if' operating scenarios can be easily modified and validated without disrupting the plant control system.

Training

Realistic training provides new and experienced operators with the confidence to quickly recognize and react to abnormal situations.

Maintenance

Standard Ovation engineering tools are used to manage simulator models which saves time and costs associated with service calls to third-party vendors.

Security

A non-production simulator platform addresses cybersecurity best practices for testing control and security updates in a risk-free environment.

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For more information:
www.Emerson.com/Ovation

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